

Calibration results

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Overview

- Compare calibration results this fall compared to last calibration during spring running
 - Comparison vs physical channels
 - Should add vs readout order by default as well
- Calibration runs
 - Run 5672: May, 2015, Hybrid T \sim -13C
 - Fall runs
 - Run 6127: Sep. 17, 2015 Hybrid T \sim +8C
 - Same firmware and software since spring testing i.e.
 - Run 6139: Sep. 28, 2015, Hybrid T \sim +8C
 - New control DPM firmware and new software

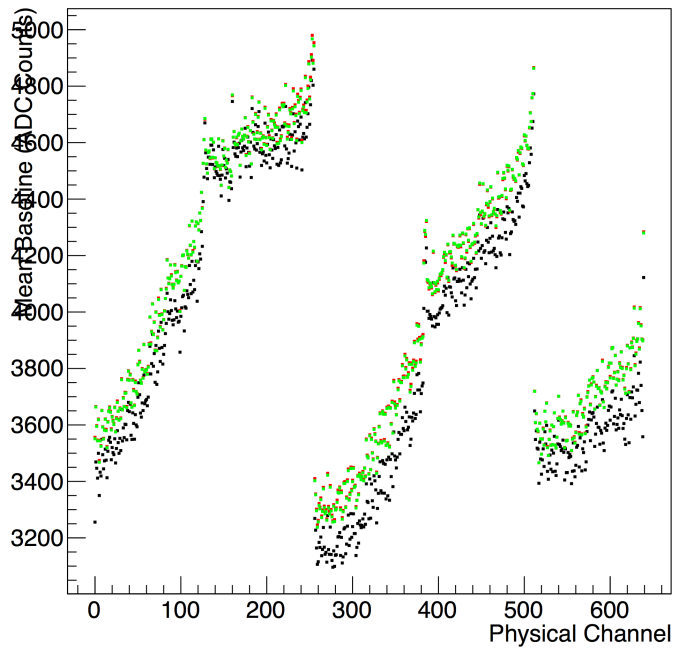
Black: eng run, red: 6127, green: 6139

Baseline

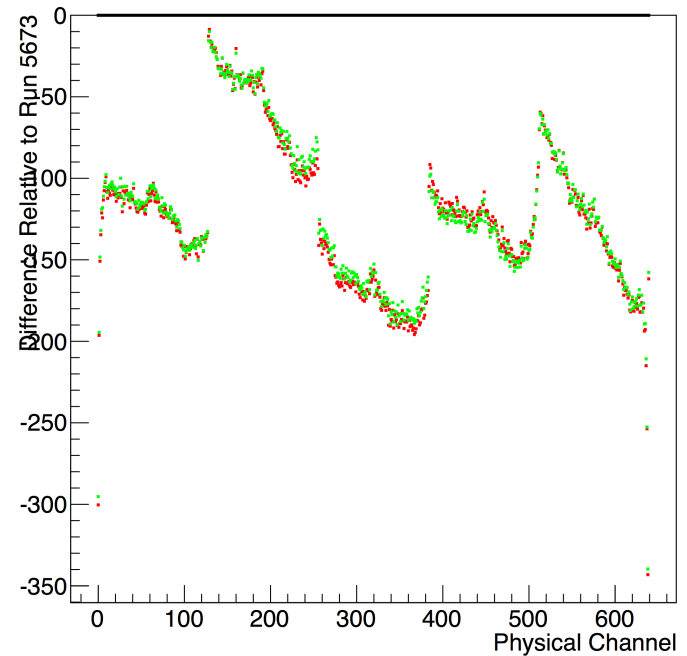
- Typical baseline shift of ~ 150 ADC

L4b

FEB: 1 Hybrid: 1 Mean Baseline - Sample 0



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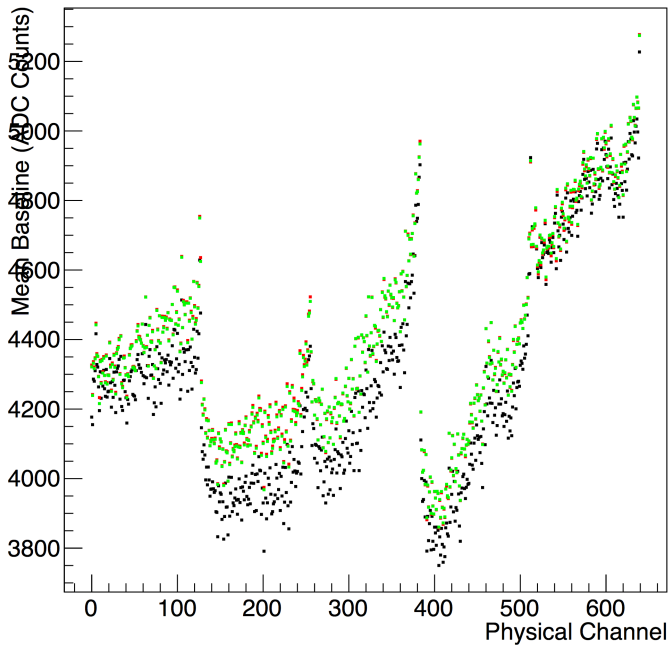


Baseline

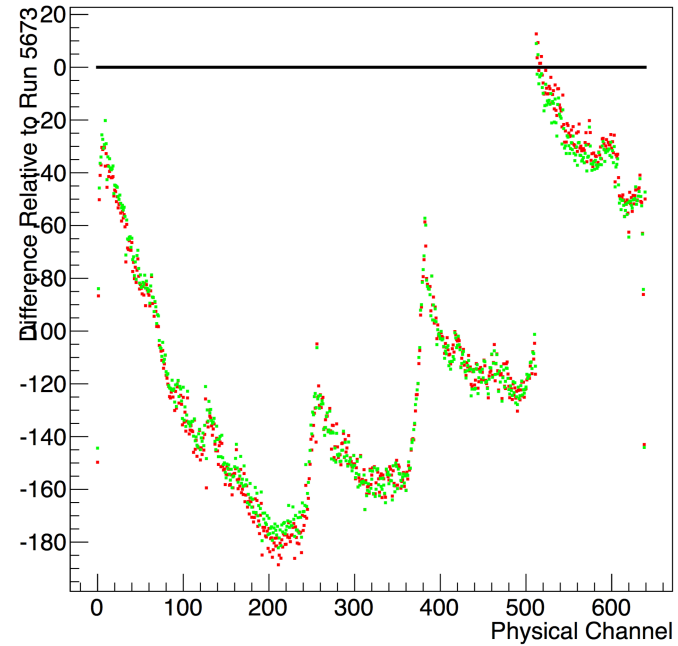
- Typical baseline shift of ~ 150 ADC

L1b

FEB: 2 Hybrid: 0 Mean Baseline - Sample 4



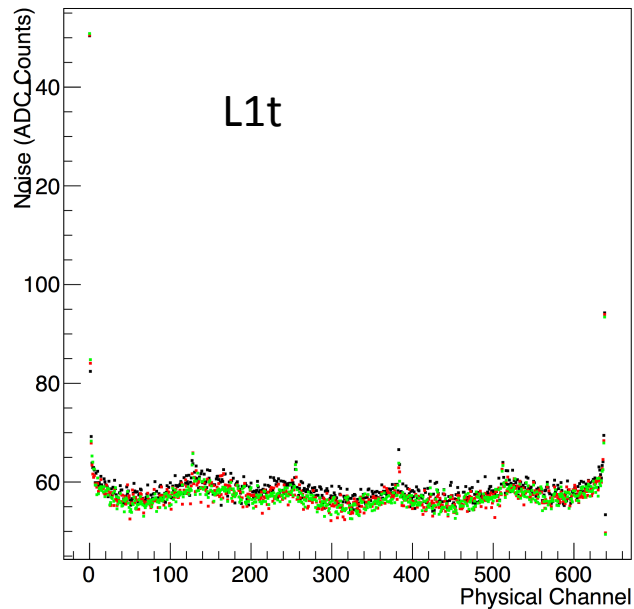
FEB: 2 Hybrid: 0 Mean Baseline - Sample 4



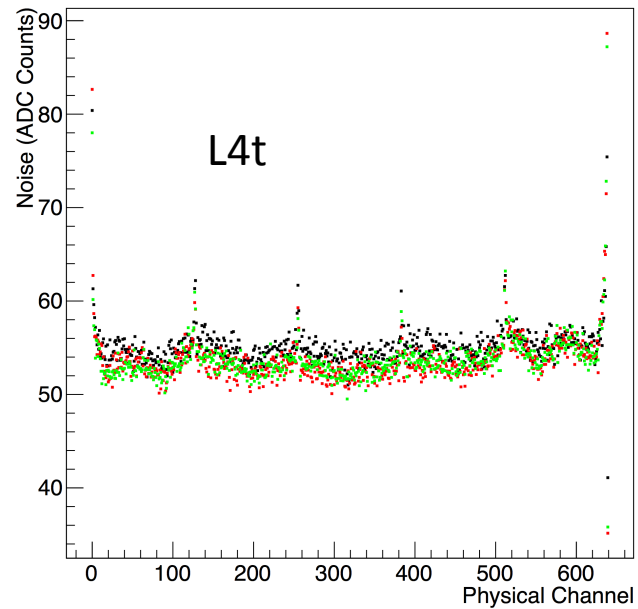
Noise

- Noise level decrease by ~ 2 ADC counts

FEB: 9 Hybrid: 1 Noise - Sample 4



FEB: 5 Hybrid: 0 Noise - Sample 3



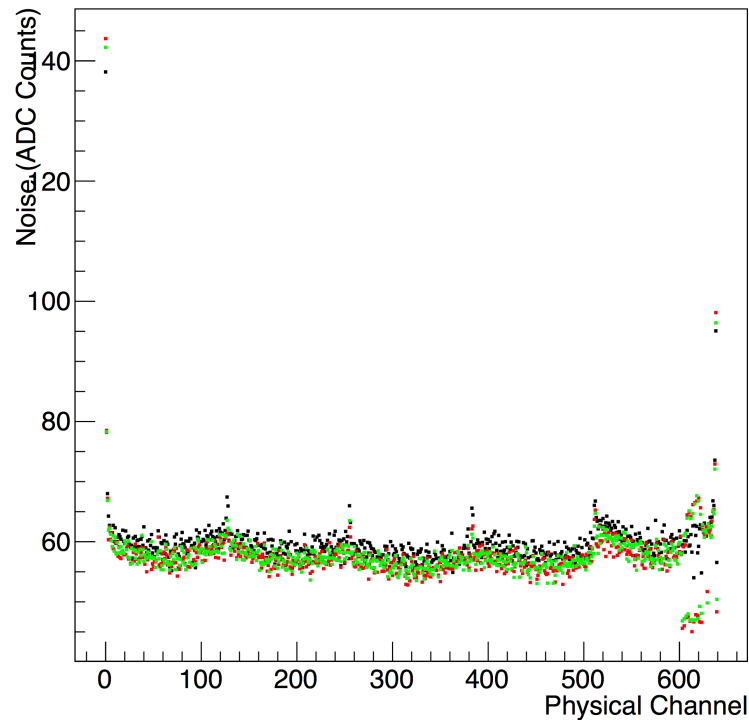
Two issues

- One APV with ~ 20 channels nearby each other at $\frac{1}{2}$ noise
 - F2H1
- Many ~ 5 channels/apv with $\frac{1}{2}$ noise: more or less periodic vs physical channel
 - F3H2, F3H3 (similar to F3H2 but much smaller effect), this is L6b
 - F7H2, F7H3, both similar to F3H2, seems more channels are affected, this is L6b

Issue 1

- One APV with half channels at $\frac{1}{2}$ noise

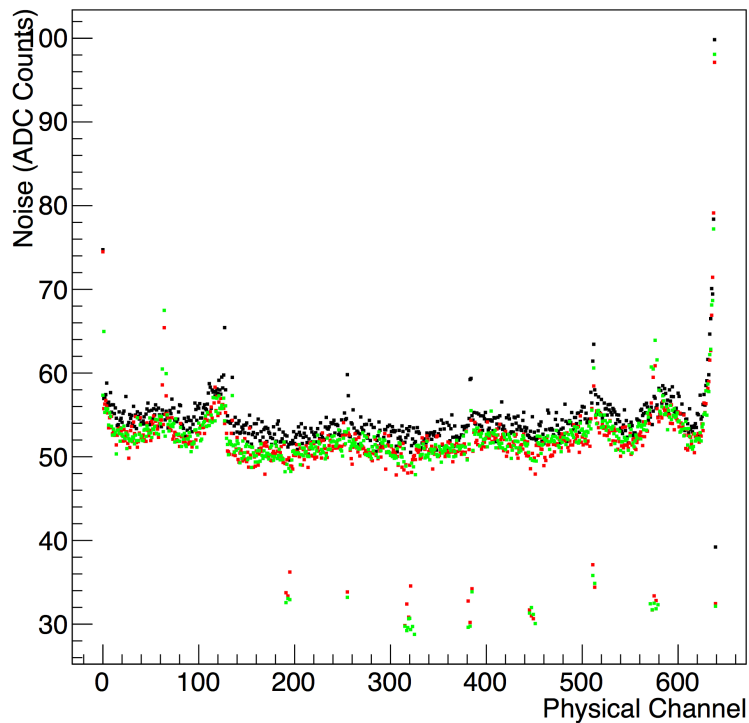
FEB: 2 Hybrid: 1 Noise - Sample 4



Issue 2

- Low noise groups “periodic” vs physical channel
- A few channels with higher noise

FEB: 3 Hybrid: 2 Noise - Sample 0



FEB: 7 Hybrid: 2 Noise - Sample 1

